

CLAIMS

1. A charge division arrangement for a CCD device for producing a divided charge output from an input charge, comprising an input for receiving an input charge, an array of elements and an output, the array of elements being arranged in rows and columns and having clock connections to allow charge in each row to be successively clocked from one row of elements to the next, at least some of the elements being arranged in a charge division unit having a first element and a second element in adjacent columns and being communicable at least temporarily so that charged introduced into the first element is divided between the first element and the second element, the charge division unit being arranged to produce divided charge for production at the output.
2. A charge division arrangement according to claim 1, comprising a plurality of charge division units, the output of one charge division unit being arranged to provide charge to the first element of a subsequent charge division unit.
3. A charge division arrangement according to claim 1 or 2, wherein the or each charge division unit comprises three elements, the first element and second element in adjacent columns and being communicable at least temporarily, a third element in a column adjacent to the second element and arranged to receive charge from the second element.
4. A charge division arrangement according to claim 3 when appendant claim 2, wherein the first element of each charge division unit is arranged to receive charge from the first element of a previous charge division unit.

5. A charge division arrangement according to any preceding claim, wherein the first element and second element in the or each unit are separated by a controllable barrier which can be controlled to permit or deny charge flow from the first to the second element.
6. A charge division arrangement according to claim 3 or 4, wherein the third and second element in the or each unit are separated by a Switchable barrier which can be controlled to channel charge from the second element to the third element.
7. A charge division arrangement according to any preceding claim wherein the charge division arrangement comprises elements within the CCD device.
8. A charge division arrangement according to any of claims 1 to 6, wherein the charge division arrangement comprises a structure separate from the CCD device.
9. A CCD device comprising a charge division arrangement according to any preceding claim.
10. A CCD imager device for producing a signal from an image, comprising a plurality of elements in any array of rows and columns and arranged to operate in an image mode or a charge division mode, in the image mode elements in adjacent columns being separated by barriers, in the charge division mode at least some elements in adjacent columns being communicable such that charge in one element is divided between that element and an element in an adjacent column, whereby charge introduced into one cell is divided.